

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for performing cell broadcasting, comprising ~~steps of:~~

receiving in a mobile station at least one data unit of a short message service cell broadcasting (SMSCB) message broadcast from at least one cell of a communication system; and
reading the SMSCB message based on a schedule message comprised of a plurality of fields for informing the mobile station of a location of the SMSCB message, a length of a schedule period, and whether a new SMSCB message has been broadcast, and wherein the plurality of fields includes a field for informing the mobile station of a location of a next schedule message.

2. (Canceled)

3. (Currently Amended) The method as claimed in claim 1, wherein the schedule message further comprises fields for informing the mobile station of at least one of a start frame of the schedule period and an end frame of the schedule period.

4. (Currently Amended) The method as claimed in claim 1, further comprising ~~a step of~~ mapping the data units to one of a common logical channel of a lower layer in the communication system and a dedicated logical channel of the lower layer in the communication system.

5. (Original) The method as claimed in claim 4, wherein the schedule message further comprises a header determining the channel to which the data units are to be mapped.

6. (Currently Amended) The method as claimed in claim 1, further comprising ~~a step of~~ mapping the data units to one of a common control channel of a lower layer in the communication system and a common traffic channel of the lower layer in the communication system.

7. (Original) The method as claimed in claim 6, wherein the schedule message further comprises a header determining the channel to which the data units are to be mapped.

8. (Original) The method as claimed in claim 1, wherein the schedule message is written as a protocol data unit.

9. (Original) The method as claimed in claim 1, wherein the at least one data unit of the SMSCB message is transmitted through a common traffic channel, the common traffic

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channel being multiplexed at a lower layer in the communication system with a common control channel, a dedicated traffic channel, and a dedicated control channel and wherein the common traffic channel and the common control channel are common logical channels and the dedicated traffic channel and the dedicated control channel are dedicated logical channels.

10. (Currently Amended) The method as claimed in claim 1, wherein the schedule message is transmitted from a higher layer in the communication system and the schedule message is received at a lower layer in the communication system.

11. (Original) The method as claimed in claim 10, wherein the lower layer performs scheduling of the SMSCB message and attaches to the schedule message a header indicative of schedule message length.

12. (Original) The method as claimed in claim 10, wherein the higher layer is a radio link control layer.

13. (Original) The method as claimed in claim 10, wherein the lower layer is a media access control (MAC) layer.

14. (Original) The method as claimed in claim 13, wherein the schedule message further comprises a MAC header.

15. (Original) The method as claimed in claim 14, wherein the MAC header comprises:

a first field indicating whether the at least one data unit is to be mapped to one of a common logical channel of the MAC layer or a dedicated logical channel of the MAC layer; and

a second field indicating whether the at least one data unit is to be mapped to one of a common control channel of the MAC layer or a common traffic channel of the MAC layer.

16. (Currently Amended) The method as claimed in claim 15, wherein[,] if the second field indicates that the data units are to be mapped to the common traffic channel, the second field also indicates whether the data units comprise the SMSCB message or the schedule message.

17. (Original) The method as claimed in claim 1, wherein the fields of the schedule message are at least a length indicator field, a schedule period start frame field, a schedule period end frame field, and a new SMSCB message indicator field.

18. (Original) The method as claimed in claim 17, wherein the schedule message further comprises a header, the header indicating whether the data units are to be mapped to a common logical channel or a dedicated logical channel and whether the data units are to be mapped to a common control channel or a common traffic channel.

19. (Original) The method as claimed in claim 17, wherein the length indicator field determines a number of octets x of the SMSCB message, where x is equal to any whole number.

20. (Original) The method as claimed in claim 19, wherein the schedule period start frame field and the schedule period end frame field define a schedule period for a renewed SMSCB message.

21. (Original) The method as claimed in claim 20, wherein the new SMSCB message indicator field indicates a start frame of the renewed SMSCB message.

22. (Currently Amended) A method for performing cell broadcasting, comprising steps of:

scheduling a short message service cell broadcasting (SMSCB) message;

multiplexing, at a ~~lower~~media access control (MAC) layer in a first communication system, a common traffic channel with a common control channel, a dedicated traffic channel, and a dedicated control channel, wherein the common traffic channel and the common control channel are common logical channels and the dedicated traffic channel and the dedicated control channel are dedicated logical channels;

generating, at the MAC layer, a schedule message for transmission of the SMSCB message; and

transmitting ~~[[a]]~~the schedule message through the common traffic channel of the first communication system.

23. (Currently Amended) The method as claimed in claim 22, further comprising a ~~step of~~ segmenting the SMSCB message into a plurality of data units to be scheduled.

24. (Currently Amended) The method as claimed in claim 22, wherein the schedule message is received at a second communication system for reading the SMSCB message and wherein the first communication system is one of a mobile station and a network, and the second communication system is the other one of the mobile station and the network.

25. (Original) The method as claimed in claim 24, wherein the schedule message is comprised of a plurality of fields for informing the mobile station of a location of the SMSCB message, a length of a schedule period, and whether the network has broadcast a new SMSCB message.

26. (Currently Amended) The method as claimed in claim ~~[[24]]~~25, wherein the schedule message further comprises a field for informing the mobile station of a location of a next schedule message.

27. (Currently Amended) The method as claimed in claim ~~[[24]]~~25, wherein the schedule message further comprises fields for informing the mobile station of at least one of a start frame of the schedule period and an end frame of the schedule period.

28. (Canceled)

29. (Currently Amended) The method as claimed in claim ~~[[28]]~~22, wherein the schedule message further comprises a MAC header.

30. (Currently Amended) The method as claimed in claim ~~[[26]]~~29, wherein the MAC header comprises:

a first field indicating whether ~~[[the]]~~a plurality of data units are to be mapped to one of the common logical channel of the MAC layer or the dedicated logical channel of the MAC layer; and

a second field indicating whether the plurality of data units are to be mapped to one of the common control channel of the MAC layer or the common traffic channel of the MAC layer.

31. (Currently Amended) A method for cell broadcasting, comprising ~~steps of~~:

receiving a schedule message through a common traffic channel of a first communication system;

demultiplexing, at a ~~lower~~ media access control (MAC) layer in the first communication system, a common traffic channel with a common control channel, a dedicated traffic channel, and a dedicated control channel, wherein the common traffic channel and the common control channel are common logical channels and the dedicated traffic channel and the dedicated control channel are dedicated logical channels; and

reading a short message service cell broadcasting (SMSCB) message based on the schedule message, wherein the schedule message includes a plurality of fields for informing the mobile station of: a location of the SMSCB message, a length of a schedule period, whether the network has broadcast a new SMSCB message, and a location of a next schedule message.

32. (Currently Amended) The method as claimed in claim 31, further comprising a ~~step of~~ reconstructing the SMSCB message from a plurality of scheduled data units.

33. (Currently Amended) The method as claimed in claim 31, wherein the schedule message is transmitted from a second communication system for scheduling the SMSCB message and wherein the first communication system is one of a mobile station and a network, and the second communication system is the other one of the mobile station and the network.

34-35. (Canceled)

36. (Currently Amended) The method as claimed in claim ~~[[33]]~~31, wherein the schedule message further ~~comprises~~includes fields for informing the mobile station of at least one of a start frame of the schedule period and an end frame of the schedule period.

37. (Canceled)

38. (Currently Amended) The method as claimed in claim ~~[[37]]~~31, wherein the schedule message further ~~comprises~~includes a MAC header.

39. (Currently Amended) The method as claimed in claim ~~[[37]]~~38, wherein the MAC header comprises:

a first field indicating whether ~~[[the]]~~a plurality of scheduled data units are to be mapped to one of the common logical channel of the MAC layer or the dedicated logical channel of the MAC layer; and

a second field indicating whether ~~[[the]]~~a plurality of scheduled data units are to be mapped to one of the common control channel of the MAC layer or the common traffic channel of the MAC layer.

40. (Currently Amended) A system for performing cell broadcasting, comprising:

a UTRAN-MAC-c entity for scheduling a short message service cell broadcasting (SMSCB) message by segmenting the SMSCB message into a plurality of data units,

multiplexing, at a UTRAN ~~lower~~ media access control (MAC) layer in a first communication system, a common traffic channel with a common control channel, a dedicated traffic channel, and a dedicated control channel, wherein the common traffic channel and the common control channel are common logical channels and the dedicated traffic channel and the dedicated control channel are dedicated logical channels,

generating, at the UTRAN MAC layer, a schedule message for transmission of the SMSCB message, and

transmitting ~~[[a]]the~~ schedule message through the common traffic channel of the first communication system; and

a UE-MAC-c entity for receiving a schedule message through a common traffic channel of a first communication system,

demultiplexing, at a UE lower layer in the first communication system, a common traffic channel with a common control channel, a dedicated traffic channel, and a dedicated control channel, wherein the common traffic channel and the common control channel are common logical channels and the dedicated traffic channel and the dedicated control channel are dedicated logical channels, and

reading the SMSCB message based on the schedule message, by reconstructing the SMSCB message from the plurality of data units,

wherein the schedule message is comprised of a plurality of fields for informing [[the]]a mobile station of a location of the SMSCB message, a length of a schedule period, ~~and~~ whether a new SMSCB message has been broadcast and a location of a next schedule message.

41. (Canceled)

42. (Currently Amended) The method as claimed in claim 40, wherein the schedule message further comprises fields for informing the mobile station of at least one of a start frame of the schedule period and an end frame of the schedule period.

43. (Currently Amended) The method as claimed in claim 40, wherein the lower layer [[is]]comprises a media access control layer.